

PRESENTED TO SOUTH CAROLINA SOLID WASTE PROFESSIONALS

Planning for Recycling

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An SAIC Company

R. W. Beck, An SAIC Company

Outline

- Planning Process
- Questions to Ask in Planning for Recycling
- Trends in Recycling and How They Impact Planning
 - Case Studies
- Regional Recycling Efforts
 - Case Studies



Planning Process



Inventory and Assessment

- What does the current system look like?
- What are its strengths and weaknesses?

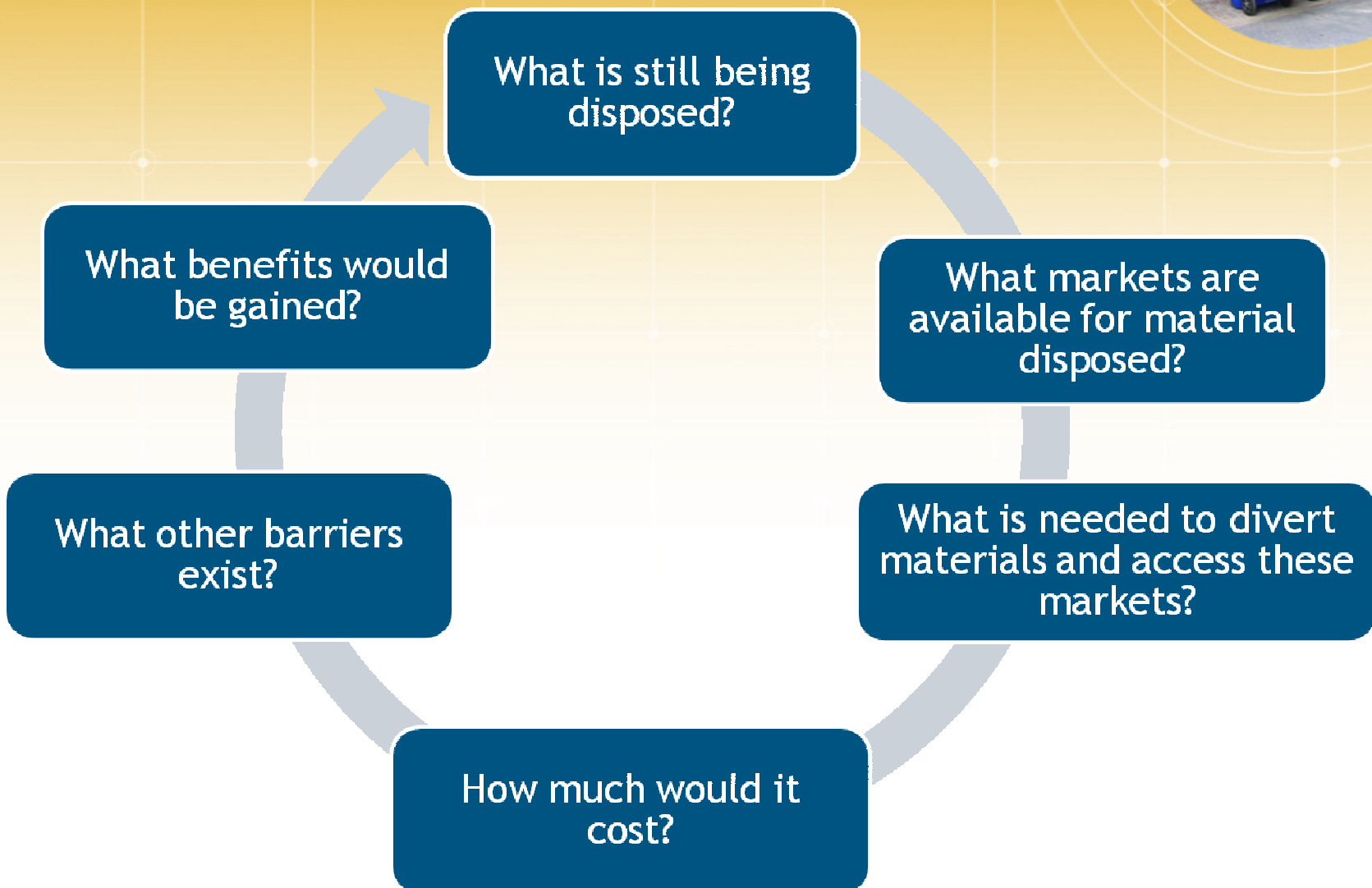
Needs and Goals

- Where does community want to be in x years?
- What is needed to get from current system to future vision?

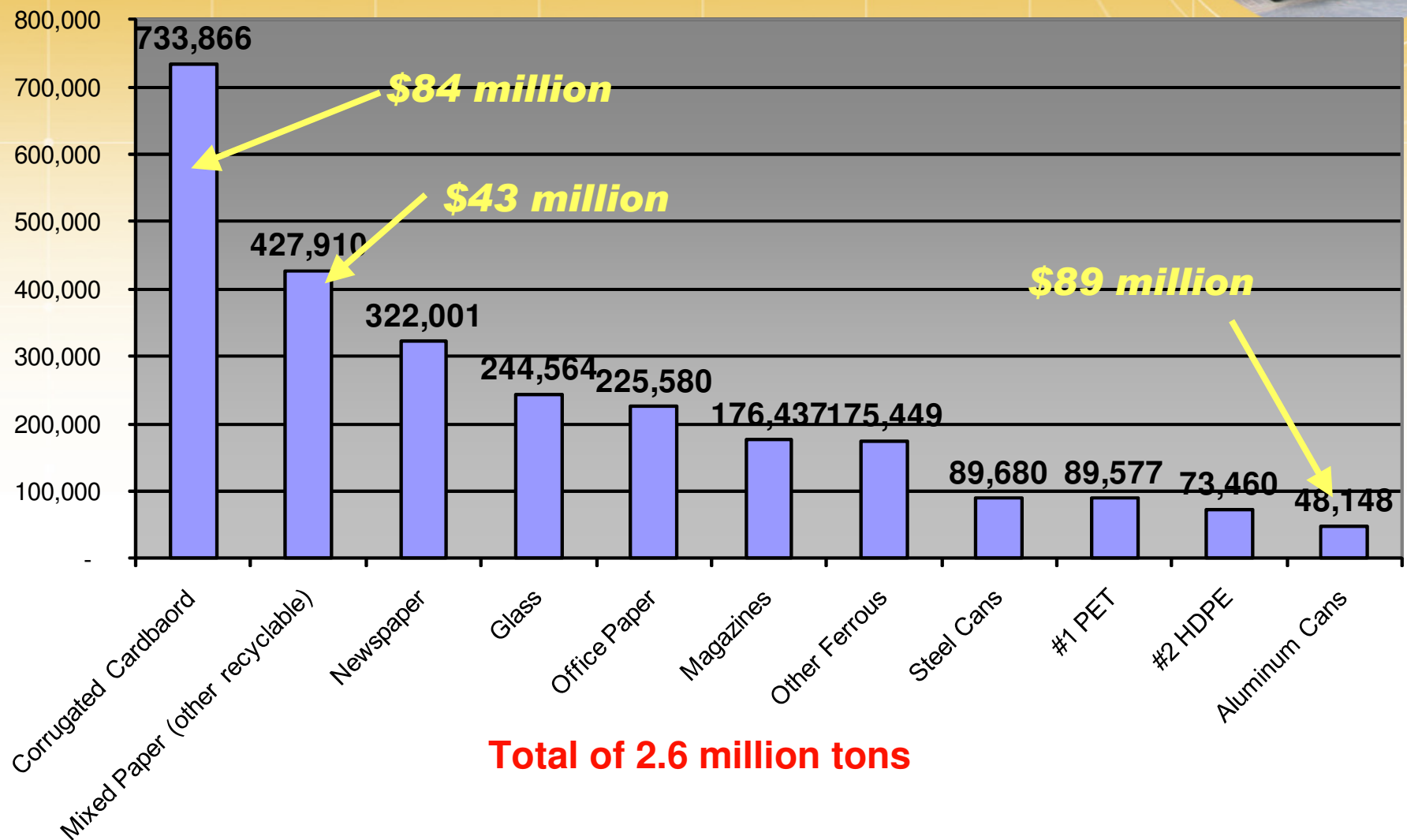
Implementation Strategy

- How will community get from here to there?
- Who will be responsible for doing what and by when?
- How much will it cost and where will the money come from?

Questions to Ask When Planning for Recycling



What is Still Being Disposed?



Setting Goals



Georgia's Per Capita MSW Disposal Rate/MSW Reduction Goal

Baseline 2004

2012

2017

Commodity	lbs/person	lbs/person	% reduction	lbs/person	% reduction
Glass	0.153	0.140	8%	0.140	8%
Paper	1.181	1.000	15%	0.850	28%
Metal	0.228	0.198	13%	0.186	18%
Plastic	0.663	0.560	16%	0.530	20%
Total	2.23	1.99	11%	1.71	23%

Trends in Recycling

- “Zero” waste
- Single stream
- Three stream collection: refuse, recyclables, organics
- Focus on non-traditional recyclables
- Extended Producer Responsibility



How Trends Impact Planning



“Zero”
waste

- Increase diversion
- Increase costs to collect recyclables
- Decrease costs to collect solid waste
- May need expanded processing infrastructure
- May need expanded end use/markets
- Continuous education campaign

How Trends Impact Planning



- Increase participation and diversion
- Decrease cost of collecting recyclables
- Increase cost of processing recyclables

Single stream



- Increase diversion
- Increase collection costs
- May need expanded processing infrastructure
- May need expanded end use/markets
- Continuous education campaign

Three sort

How Trends Impact Planning

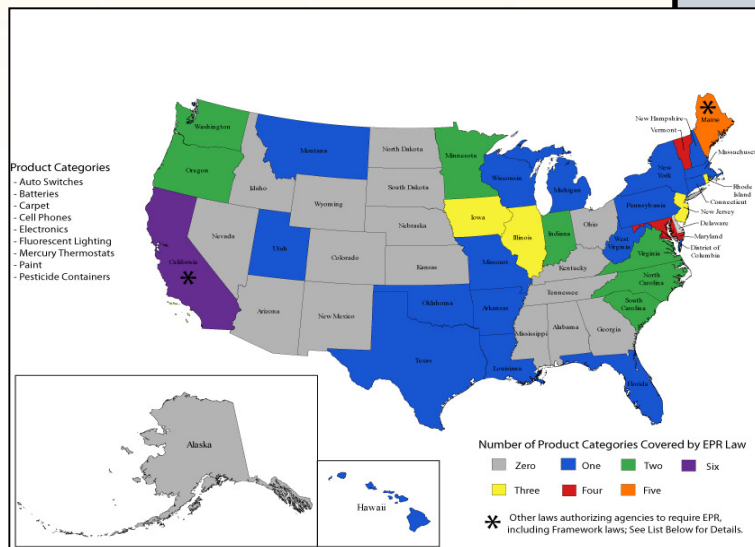


Extended Producer Responsibility

- State (usually) legislation requiring producers to support recovery infrastructure
- 60 laws in 33 states (SC for electronics and auto switches)
- Expanding to other materials like packaging

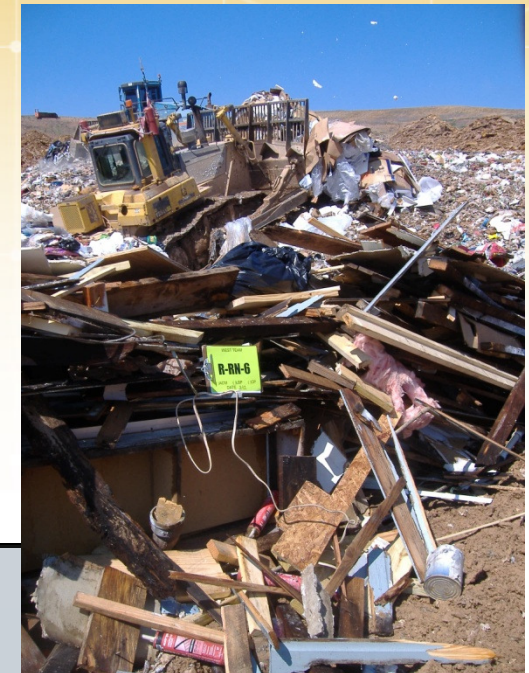
Planning implications

- Producers may want bigger role in determining recovery approach
- Producers may assume local government programs and infrastructure



Source: Product Stewardship Institute, 2010

How Trends Impact Planning



Focus on non-traditional recyclables

- Increase diversion
- May need expanded processing infrastructure
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- Continuous education campaign

Case Study: Boulder Colorado



- City Council set zero waste goal by resolution
- City private haulers required to collect refuse in three streams
 - single stream recyclables
 - organics to compost facility
 - refuse
- Residents pay less for smaller containers for refuse

Case Study: Boulder Colorado



- Over half of households in Boulder subscribe to 32 gallons of trash per week or less
- HHW collection facility with other communities and Center for Hard-to-Recycle Materials
- Waste reduction activities funded through “trash tax” on haulers who pass along to customers
- Trash tax funds infrastructure for waste reduction

Case Study: Mecklenburg County, North Carolina



- Converted County-owned, contractor operated MRF to single-stream in 2010
- City of Charlotte switched their collection to single stream collection
- Allowed City to expand materials accepted
- Total tonnage processed increased about 22 percent from prior year in first month
- Mandatory business recycling ordinance

Opportunities for Regionalization

- Processing and Marketing
- Network of Collection Locations
- Public Education



Regional Processing and Marketing



Advantages

- Economies of scale may result in reduced per ton costs
- Markets may be more interested in larger volumes

Challenges

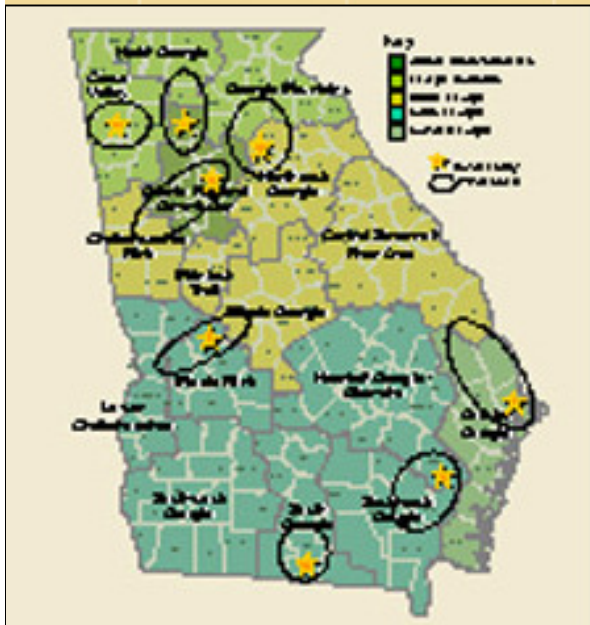
- Overcoming hurdles to collaboration
- Identifying approach that benefit all
- Potential need to adjust existing programs

Georgia Regional Recycling Hubs



- R. W. Beck study indicated tonnage and value of recyclables still disposed by region
- End use markets for most materials strong in State
- Challenge was for smaller communities to get recyclables collected, processed, and to market cost-effectively

Georgia Regional Recycling Hubs

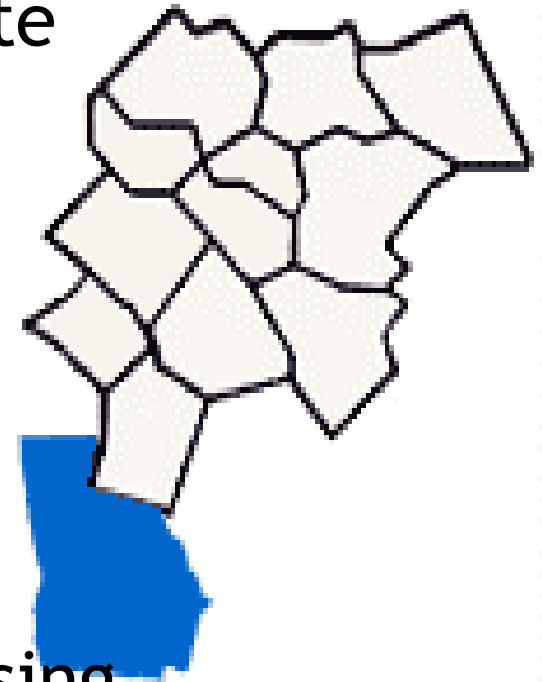


- State used grant funds to support development of four regional transfer stations
- Participation by private processors and end users
- Local governments served by hub commit to expand collection

Northeast Georgia Regional Solid Waste Authority



- Ten counties prepare joint solid waste management plan
- Separate collection programs for recyclables (primarily drop-off)
- Athens-Clarke County owns recycling facility
- Private operator offers lower processing fee to County as tonnage increases
- Athens-Clarke County offers free tipping to other counties



Tri-County Hazardous Waste & Recycling Program (Oregon)



- Collects hazardous waste from households, businesses (conditionally exempt generators), orchardists, and farmers
- Two permanent collection facilities and periodic events in out-lying areas
- Funded through:
 - surcharge on tip fee at one of the county's landfill (which appears as a fee on garbage bills)
 - separate contribution from the County that does not use this landfill
 - user fees for special services

Tri-County Hazardous Waste & Recycling Program



- Expanded services to provide recycling planning, education and promotion services to the Tri-County area
- Work with local schools to help them with waste reduction and recycling efforts, accessing the statewide Oregon Green Schools program
- Loan program for beverage recycling containers for local events

Measure and Adjust

- Tons reduction in disposal
- Tons recycled
- Recycling rate
- Participation rate
- Cost per ton
- Recyclables still disposed
- Achievement of other goals established





Contact information:

Abby Goldsmith

R. W. Beck. Inc.

(404) 870-9098

agoldsmith@rwbeck.com